



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,868	01/12/2001	Jonathan C. Salas	MOON-P004	2417
38396	7590	11/14/2005	EXAMINER BANANKHAH, MAJID A	
JOHN BRUCKNER, P.C. 5708 BACK BAY LANE AUSTIN, TX 78739			ART UNIT 2195	PAPER NUMBER
DATE MAILED: 11/14/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

This Office Action is in response to communication filed on October 17 2005. Applicant's arguments have been fully considered but they are not deemed to be persuasive. Claims 1-2, 5-17, and 24-29 are presented for examination.

Response to Arguments

Applicant on page 7 of his Remarks, arguing "[L]ogston and/or Armentrout do not describe or teach a first distributor server set and a second distributor server set coupled to the first distributor server set. Logston and/or Armentrout do not describe or teach that a first distributor server set redirects the computing task to the first server of the second distributor server set and that the first server allocates the computing task to the second server that executes the allocated computing task."

It is submitted that, Logston in Fig. 2 teaches of server set. Any of the elements 202 204 208 and or 208 is a server set. Furthermore, McCanne teach of the servers are grouped into clusters and the client request is redirected to a cluster based on the address field of the packet (McCanne, col. 3, lines 55-68).

Later on page 7-8, Applicant arguing that "[M]cCanne discloses the notion of "service access points" (column 6, lines 5-14), and finally come to the conclusion that "[e]very one of the service access points has a complete database."

It is noted that "database" is appeared for the first time in claim 11, and there is no "database" in any of the independent claim. Additionally, even if true, the system of McCanne is functionally the same as the claimed invention. McCanne teaches of load balancing in a distributed environment wherein the servers are

grouped into clusters and the client request is redirected to a cluster based on the address field of the packet (McCanne, col. 3, lines 55-68), for the reason to avoid multicast and increase efficiency and reduce traffic.

On page 8, Applicant arguing that in the system of McCanne, "[I]f no suitable server is found, a server selector will redirect the computing task to another server 60", and later argues that "[I]n contrast to McCanne, a client request according to the claimed invention is serially passed among members of the distributor server sets as each of the members is sequentially searched. The request is passed to the next distributor sever in the set (if an attribute satisfactory fulfillment server is not found in the database associated with the current distribution manager) until an appropriate distribution manager is located." Later on page 8-10, arguing that "[A] problem with McCanne's approach is that it adds an overhead of traffic to the network during DB synchronization. The advantage of McCanne, however, is one-step access to the client request. The claimed invention on the other hand requires that requests from clients be sequentially forwarded to different distribution managers until an appropriate fulfillment server is found."

It is submitted that the Examiner disagrees with this argument for several reasons. First, the limitation of sequentially searching each member of the server set does not have support in the specification and is added as amendment to the claims and is considered new matter as explained in the rejection of claims under 35 USC 112 First paragraph [*supra*]. Secondly, assuming this is true and there is support in the specification for sequentially searching the distributor server sets, there is no guarantee that the matched server or the fulfillment server is found within the first distribution server set. The system can searches every server set sequentially and finds the right match in the last server set. Third, the argument regarding efficiency is mere allegation and there is no data available to compare

Art Unit: 2195

between the two methods that shows that least more than fifty percent of the time applicant's invention is more efficient.

Claim Rejections - 35 USC § 112 First paragraph

The following is a quotation of the first paragraph of 35

U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 5-17, and 24-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to independent claims 1, and 15:

Applicant amending claim 1, and 15 to include the limitation of "the first distributor server set receives the computing task, is sequentially searched and, independent of attributes of the computing task and the client". The specification does not clearly teach how the server set is sequentially searched independent of attributes of the computing task and client.

Art Unit: 2195

Furthermore, there is no teaching as how the "independent of attributes of the computing task and the client", the first distributor server set, is sequentially searched.

These statements are considered new matter and must be deleted in the future correspondence.

As to dependent claims 2, 5-14, 16-17, and 24-29:

The claims are rejected for the rejection of the independent claim 1 and 15.

Claim Rejections - 35 USC § 112 Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C.

112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 5-17, and 24-29 rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 1-2, 5-17, and 24-29 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed October 17, 2005. In that paper, on 7, applicant has stated "[T]he claims are amended in order to more clearly define the invention, support for which is found in the figures (especially Figs. 1b and 4) and related parts of the specification". Later on, it is stated "[S]pecifically, support for reciting sequentially searched is found in figure 4, especially blocks 4500 and 4600 (see also the

Art Unit: 2195

associated description at page 12, lines 5-7). Support for reciting independent of attributes of the computing task and the client is found at page 9, lines 5-8 and page 12, lines 5-7.

Figs 1b and 4, in block 4500, server is checked on list of server an when conditions such as "on line?", "user attributes?", "computing task attributes?", and "server attributes?" are checked, and if any or all are negative the program return to back of the list in block 4600. Or for example on page 12, lines 5-7, it is indicated that "[I]f the server does not contain all the attributes, the distributor manager returns to the list of servers that contained the requested application 4600 and checks another server 4500." That statement means what it says. That is, if the server does not matched all the attributes, the distributor manager returns to the list of servers that contained the requested application and checks another server. There is not indication in any of the foregoing that, the server set receiving the computing task is sequentially searched, as recited in claim 1.

Furthermore, it is indicated that on page 7, that "[S]upport for reciting independent of attributes of the computing task and the client is found on page 9, lines 5-8 and page 12, lines 5-7. Page 9, lines 5-8, indicates "[F]or example, distributor manager 52 will search the server database 54 to find a fulfillment server from the plurality of fulfillment servers 100 200 300 400 that match the attributes of the computing task and the client. If no suitable server is found, a server selector 56 will re-direct the computing task to another distributor server 60". Where in the above statement, there is nay indication that server set receiving the computing task is searched sequentially independent of attributes of task and client.

These statements indicates that the invention is different from what is defined in the claim(s) because there is no indication of any of these claims limitation in the specification as stated above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5-17, and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logston et al. (US Pat. No. 6,687,735, hereinafter Logston) in view of Armentrout et al. (US Pat. No. 6,463,457, hereinafter Armentrout), further in view of McCanne et al (US Pat. No. 6,415,323, hereinafter McCanne).

Per independent claims 1, and 15:

the reference of Logston teaches of allocation of a distributed application among a plurality of servers, wherein a client is coupled to a number of servers (see Logston, Abstract, Fig.2, col. 3, lines 14-31). A client coupled to the plurality of servers to request a computing task (col. 3, Ins. 62- to col. 3, ln. 9); a first server to allocate the computing task to a second server that executes the allocated computing task (col. 3, Ins. 58-61, moving the server portion to a second server within the network).

While the reference of Logston teaches of allocating the distributed application to server based on a measured parameter associated with a the access of the server portion (col. 4, ln. 55 to col. 5, ln. 7), he fails to explicitly teaches that the allocation of the computing task to the second server is performed by matching an attribute of the second server with an attribute of the computing task.

Armentrout et al. in the same field of endeavor teaches of a distributed system wherein the allocation of the load of the server to another processor is based on matching the attributes of the another processor or server (Armentrout, col. 2, Ins. 38-60, and col. 3, Ins. 1-25), for the reason to minimize the idle computation among the servers and use the maximum efficiency of the computational power. It would have been obvious for a person ordinary skill in the art at the time the invention was made to use the matching attribute method of Armentrout with the load distribution method of Logston in order to use the maximum efficiency of the computers and their resources by reducing the idle time and not assigning a high capacity server to a low demand client request (See Armentrout, col. 4, Ins. 9-16).

Regarding the amended limitation of "server sets", and "redirecting the request to another server set", the modified reference of Logston does not clearly teach of a "first and second distributor server set" and "redirecting the task to a second distributor server set". The reference of McCanne, in the same field of endeavor, teaches of load balancing in a distributed environment wherein the servers are grouped into clusters and the client request is redirected to a cluster based on the address field of the packet (McCanne, col. 3, lines 55-68), for the reason to avoid multicast and increase efficiency and reduce traffic, Therefore, it would have been obvious for a person ordinary skill in the art at the time the invention was made to use the matching attribute method of Armentrout with the request redirection method of McCanne in order to use the maximum efficiency of the computers and their resources by reducing the idle time and not assigning a high capacity server to a low demand client request (See McCanne, col. 4, Ins. 59, to col. 5, line 15).

Regarding the dynamic allocation the server portion of distributed applications among multiple server machines, in Logston, it is well known that an application is a computer program that is

Art Unit: 2195

broken into different component such as task. The method of Logston is applicable to task much the same way as it is applicable to application components and does not reduces its capability by using task because application has the same properties as task.

Per dependent claim 2-3:

in the system of Logston the second server and the first server comprises a plurality of fulfillment Servers (McCanne, col. 4, ln. 59 to col. 5, line 15).

Per dependent claims 4:

another server allocates the request to the first server. The allocation is dynamic and any server can allocates to any other server after the first initial allocation and this is what exactly Logston teaches (col. 1, ln. 66 to col. 2, ln. 23).

Per dependent claim 5:

the attribute of the second server is load capacity. Armentrout teaches of load capacity in col. 4, ln. 66 to col. 5, ln. 14.

Per dependent claim 6:

the attribute of the second server is type of application residing on the server. Logston teaches of optimal server load balancing (col. 8, lns 63 to col. 9, ln. 7) and matching application type with the server is a way of optimally operating the system performance, for the reason that it saves time.

Per dependent claim 7-8:

the attribute of the second server is idle computing power. Armentrout teaches of computing power in col. 3, ln. 48-55 (idle computational power). Also he teaches of server computational power in col. 4, ln. 66 to col. 5, ln. 14.

Per dependent claim 9:

the attribute of the second server is matched to an attribute of the client. Armentrout teaches of the limitation in col. 3, lns. 1-25.

Per dependent claim 10:

the attribute of the second server is matched to an attribute of a user. The reference of Armentrout teaches of the attributes of the user in col. 2, lns. 24-29. Additionally, the system of Armentrout is based on the client demand.

Per dependent claim 11:

a database contained in the first server that stores the attributes of the second server (see, Armentrout, database server, col. 18, ln. 62 to col. 19, ln.6).

Per dependent claim 12:

the database is dynamically upgraded with a current attribute of the second server (Logston, col. 13, lns 51-54, updating statistical database in server farm).

Per dependent claim 13:

a database storing user attributes (Armentrout, col. 18, ln. 62 to col. 19, ln. 6).

Per dependent claim 14:

a database computing task attributes. Please see the rejection of claims 11-13.

Per dependent claim 16:

please see the rejection of claims 5, 8 and 9.

Per dependent claim 17:

please see the rejection of claim 12 above.

Per dependent claim 24:

managing a set of serve including: creating a record of the attributes of a second set of servers in a database contained in a first set of server; and updating said record in the database, wherein the second set of servers communicates its attributes to the first set of server. Armentrout teaches of a database server wherein the second set of servers can communicates their attributes with the first servers (see, Armentrout, database server, col. 18, ln. 62 to col. 19, ln.6, and McCanne, col. 9, lines 28-47).

Per dependent claim 25:

the dynamic scheduling system of Armentrout teaches of this limitation in col. 18, lns. 47-61.

Per dependent claim 26:

the transfer of attributes is scheduled by a triggering event (Armentrout, col. 18, lns. 47-61).

Per dependent claim 27:

the transfer of attributes is scheduled periodically (Armentrout, col. 12, lns. 15-20, and col. 21, lns. 33-45).

Per dependent claim 28:

the step of registering a server from the second set of servers with a server from the first set of server, wherein the transfer of attributes is from the registered second server to the corresponding first server. It is well known that any time there is an association of a server with another server for communication and information forwarding, the addresses of the two should be registered. Since there is a transfer of attributes between the two in the Armentrout (Armentrout, col. 12, lns. 15-20, and col. 21, lns. 33-45), there exist a registering of the servers as well.

Per dependent claim 29:

Art Unit: 2195

transfer of attributes is broadcasted to all the servers of the first set (see the communication in the server farm in Logston, col. 3, lns. 13-31).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

How to Contact the Examiner:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Majid Banankhah, whose telephone number is 571-272-3770. A voice mail service is also available at this number. The Examiner can normally be reached on Monday, and Wednesday - Friday, 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-Ai who can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2195

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

All responses sent by U.S. Mail should be mailed to:

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

PTO CENTRAL FAX NUMBER:
703-872-9306

- Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist:
(703) 305-3900.

MAJID BANANKHAH
PRIMARY EXAMINER

